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## Remarks

Claims 50-53, 56-60, 63, 64, and 67-84 are pending in the subject application. Applicants gratefully acknowledge the Examiner's withdrawal of the rejection under 35 U.S.C. § 102(b). By this Amendment, Applicants have amended claims 50-53, 63, 64, 67-69, 71, 72, and 74 and added new claims 85 and 86. Support for the amendments and new claims can be found throughout the subject specification and in the claims as originally filed (see, for example, page 63, line 12, through to page 68, line 25). Entry and consideration of the amendments presented herein is respectfully requested. Accordingly, claims 50-53, 56-60, 63, 64, and 67-86 are currently before the Examiner. Favorable consideration of the pending claims is respectfully requested.

As an initial matter, Applicants gratefully acknowledge the Examiner's indication that claims 60 and 73 are objected to but would be <u>allowable</u> if rewritten into independent form to include the limitations of any base and intervening claims.

Claims 50-52, 56-59, 63, 64, 67, 68, 71, 72, and 74-84 are rejected under 35 U.S.C. §§ 102(a) and (b) as anticipated by Osoegawa et al. (1998) as evidenced by Genbank Accession No. AC009631, and an email from Pieter de Jong. Claims 50-52, 56-59, 63, 64, 67, and 68 are rejected under 35 U.S.C. §§ 102(a) and (b) as anticipated by Osoegawa et al. (1998) as evidenced by Genbank Accession No. AC068274, and an email from Pieter de Jong. The Office Action argues that Osoegawa et al. meets several of the elements of claim 50. For example, it is argued that the sequence meets element (a) because there are more than 1000 consecutive nucleotides of SEQ ID NO: 179, specifically nucleotides 52017 to 53242 which comprise 1225 consecutive nucleotides of SEQ ID NO: 179. The sequence of Osoegawa et al. is also argued to anticipate the complement claimed in (d) and (e) for all of positions 51333, 51435, 51468, 51515, 51557, 51566, 51632, 51666, 52016, 52096, 52151, 52282, 52348, 52410, 52580, 52712, 52772, 52860 and 53092 of SEQ ID NO: 179, where the central T is position 32703 of SEQ ID NO: 179, where N is one of these listed positions and X is within the range of 8-30, including 8, 10, 12, 15, 20 or 25. The Office Action further argues that, with regard to claims 71-72 and 74-84, Osoegawa et al. teaches oligonucleotides of 1225 contiguous nucleotides which comprise a contiguous span of more than 1000 nucleotides overlapping positions 52626-53599. The Office Action also states that the Osoegawa et al. reference teaches synthesis of BAC chromosome libraries and teaches the synthesis of a particular BAC library

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termed RPCI-11 and that the email of Pieter de Jong indicates that filters from the RPCI-11 library were first publicly available, used and sold on August 1, 1997. Applicants respectfully assert that the references do not anticipate the presently claimed invention. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §§ 102(a) and (b) is respectfully requested.

Claim 53 is rejected under 35 U.S.C. § 103(a) as obvious over Osoegawa et al. (1998) in view of Capecchi et al. (1989). The Office Action states that it would have been prima facie obvious to one of ordinary skill in the art to screen each of the sequences of Osoegawa et al. for functional activity using the homologous recombination method of Capecchi et al. Applicants respectfully assert that the cited references do not render the claimed invention obvious. As discussed above, Osoegawa et al. fails to provide any teaching that meets the limitations of the presently claimed invention. For example, Applicants respectfully assert that Osoegawa et al. fail to teach spans of consecutive nucleic acids that meet the limitations of the claims. Further, Capecchi et al. fail to remedy the defects noted in the teachings of Osoegawa et al. Accordingly, it is respectfully submitted that a prima facie case of obviousness has not been established for the claimed invention. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

Applicants note that new claim 85 corresponds to pending claim 67, which has been rewritten in independent form by incorporating subpart c) of pending claim 50. New claim 86 corresponds to pending claim 68, which has been rewritten in independent form by incorporating subpart c) of pending claim 50. Applicants respectfully assert that the BAC RP11-372K15 comprises a span of 2010 nucleotides that is 99% identical to nucleotides 51233 to 53242 of SEQ ID NO:179. New claim 85 is directed to a probe consisting of a contiguous span of SEQ ID NO:179 spanning from position N-X to position N+Y of SEQ ID NO:179, wherein the numbers X and Y are within a range of 8 to 30. Independently of the value of N, the BAC RP11-372K15 is not a probe consisting of a contiguous span of, at most, 61 nucleotides spanning from position N-X to position N+Y of SEQ ID NO:179. New claim 86 is directed to a primer consisting of a contiguous span of SEQ ID NO:179 spanning from position N-X to position N-1 of SEQ ID NO:179, wherein the number X is within a range of 8 to 30. Independently of the value of N, the BAC RP11-372K15 is not a primer consisting of a contiguous span of, at most, 30 nucleotides spanning from position N-X to position N-1 of SEQ

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ID NO:179. Accordingly, Applicants respectfully submit that the presently claimed invention is neither anticipated Osoegawa et al. nor rendered obvious by the combination of Osoegawa et al. in view of Capecchi et al. and the allowance of these claims is respectfully requested.

It should be understood that the amendments presented herein have been made solely to expedite prosecution of the subject application to completion and should not be construed as an indication of Applicants' agreement with or acquiescence in the Examiner's position. Applicants expressly reserve the right to pursue the invention(s) disclosed in the subject application, including any subject matter canceled or not pursued during prosecution of the subject application, in a related application.

In view of the foregoing remarks and amendments to the claims, Applicants believe that the currently pending claims are in condition for allowance, and such action is respectfully requested.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§1.16 or 1.17 as required by this paper to Deposit Account No. 19-0065.

Applicants invite the Examiner to call the undersigned if clarification is needed on any of this response, or if the Examiner believes a telephonic interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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